

Signal Symposium

2004

LandWarNet

Networking the Force for the Joint Fight

LTG Steven W. Boutelle
Chief Information Officer/G-6



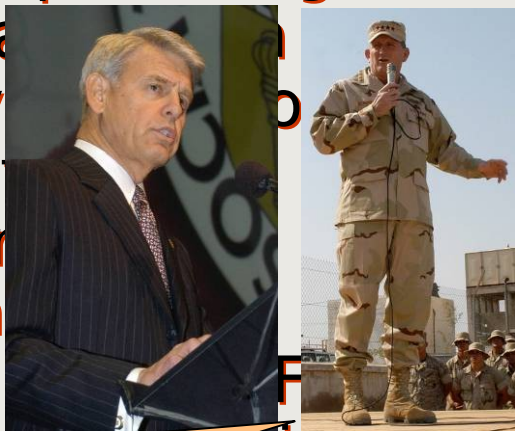


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Why are we transforming?



“The Army, together with the joint community, must relentlessly address the architectures, protocols, and systems of a redundant, non-terrestrial network capable of providing the focused base necessary for mobile Battle Command and



“The lesson of this War is that effectiveness in combat will depend heavily on jointness - that is, the ability of different branches of our Military to communicate and coordinate efforts



Secretary of Defense Donald Rumsfeld

Acting Secretary of the Army/Army Chief of Staff White Paper
<http://www.carlisle.army.mil/usawc/parameters/04summer/schoolmak.htm>

“.....immediate needs may overweigh protection of the program of record.....
shift resource risk away from fighting
Soldiers.”

“...streamlined modular organizations...
link to Home Station Operation Centers to
minimize forward footprints; ...
network-enabled organizations
capable of commanding or supporting joint
and multinational as well as Army forces”

“... the norm will be short-notice operations, extremely austere theaters of operation, and incomplete



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“Consider our enemies in the War on terror. Men who believe, literally, that they are on a mission from God to destroy your civilization and who regard death as a promotion . . .”

- Ralph Peters
In Praise of Attrition

Parameters (Summer 2004)

In Praise of Attrition

Parameters (Summer 2004)



The tools of the Insurgency



Weapons Caches





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The tools of the Insurgency



Atrocities

2 Decemb

Our Army At War - Relevant



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The tools of the Insurgency

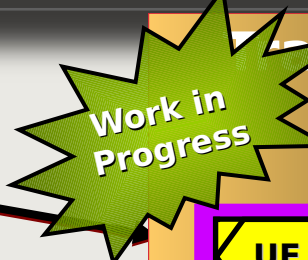
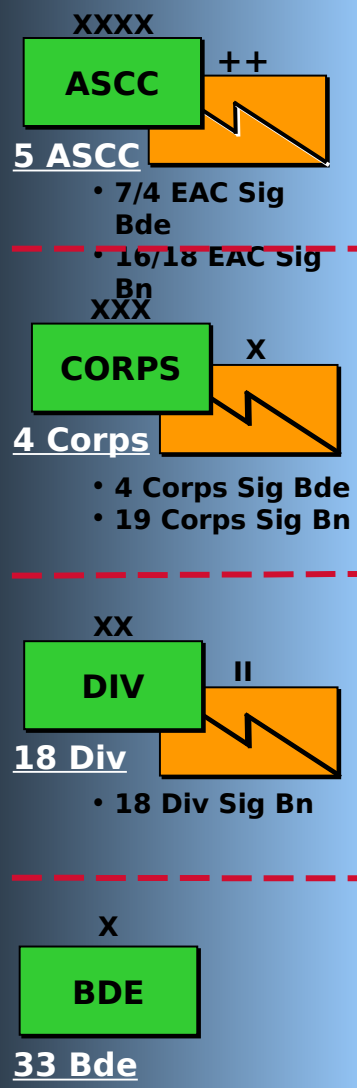




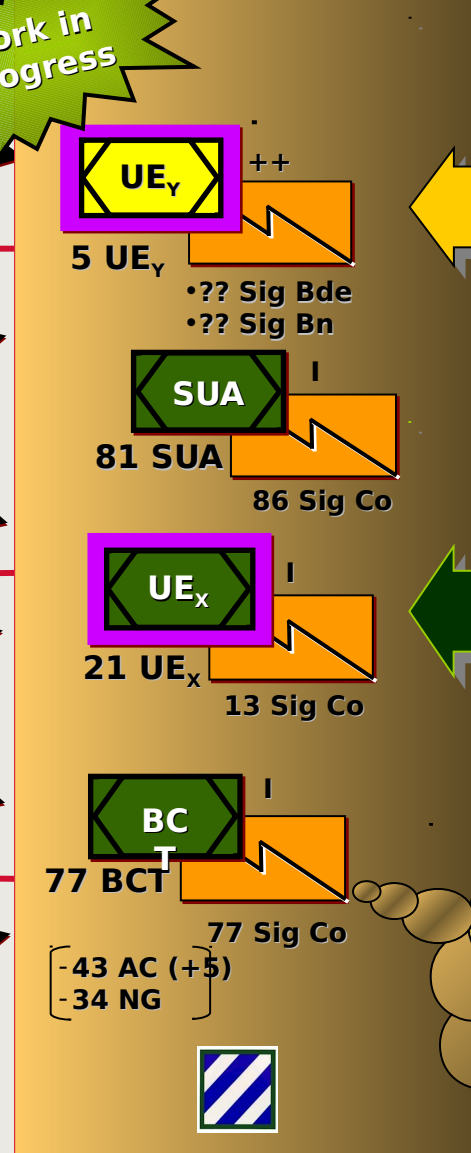
What is the Army transforming to



Current

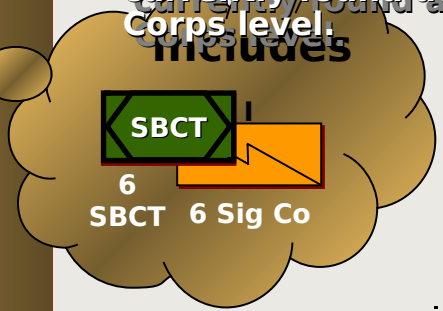


Transformed



• Assume theater operational and strategic functions ASCCs and Corps now perform.
• Command and coordinate support for multiple UEX as well as Joint and coalition forces.

• Command at least six Brigade Combat Teams, Support UAs, and Joint/Coalition forces.
• Provides two deployable command posts.
• Includes many capabilities currently found at Corps level.





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LandWarNet Vision

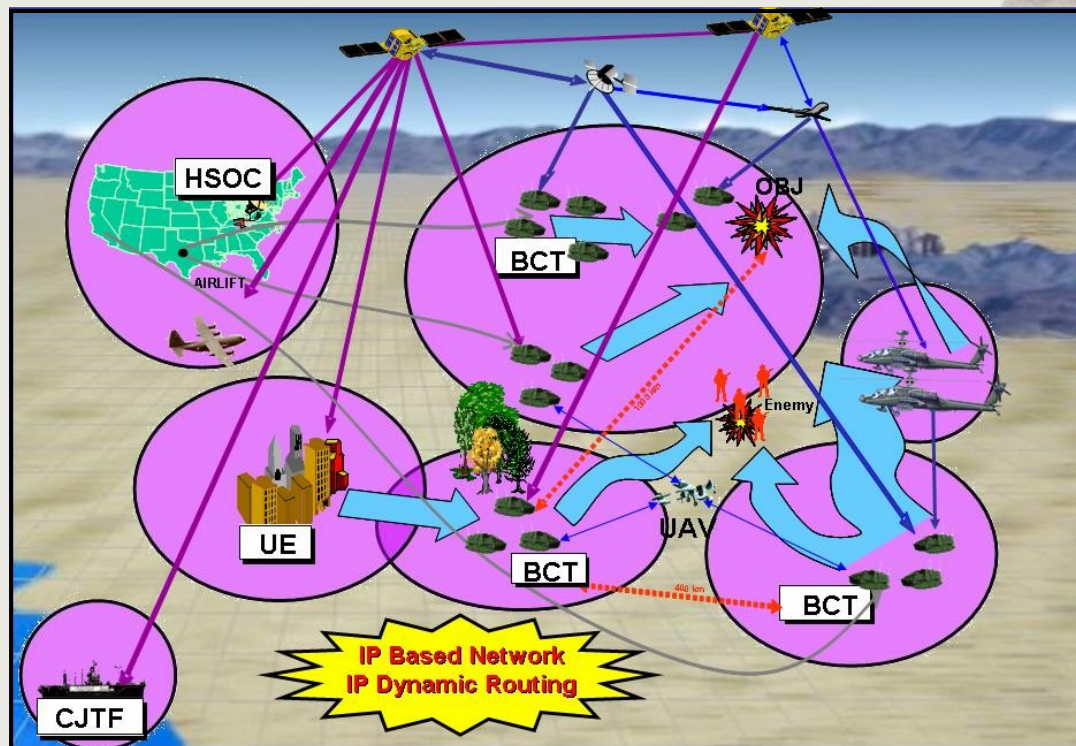


Provide.....

...authorized users with a seamless, secure, and interconnected information environment, meeting real-time and near real-time needs of both the warfighter and the business user.

To Ensure...

- Assured data access
- Faster decision making
- Smarter decisions based on
 - access to more quality information
- Better collaboration
 - shared battlespace awareness
- Rapid community of interest formation



LandWarNet ...the Army's Global Information Grid (GIG)



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The Army CIO/G6

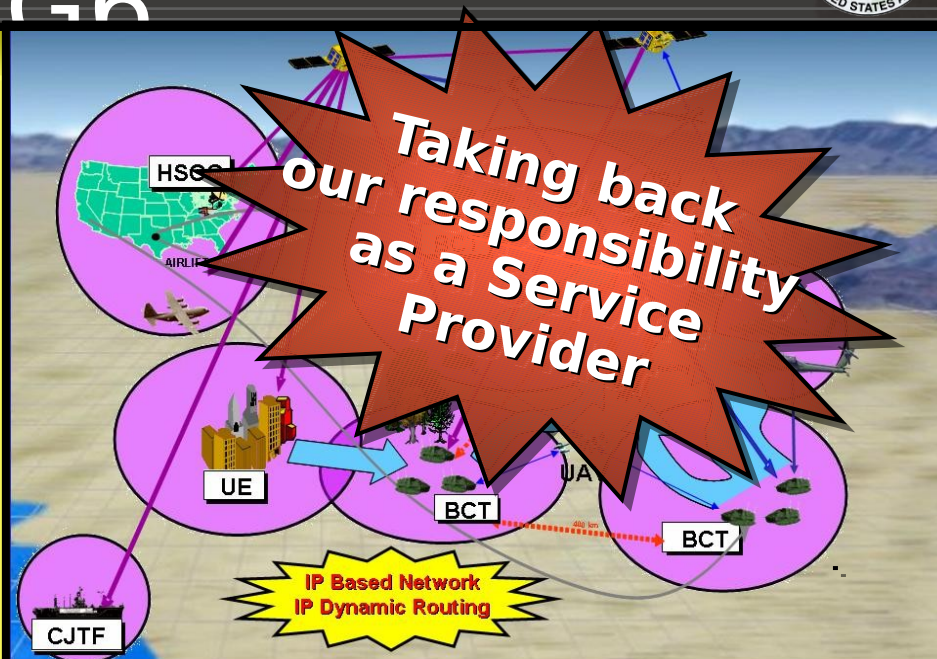
Single Enterprise Network
Expanding our capability
.....Buying out other networks

- The CSS network
- The Trojan Spirit network

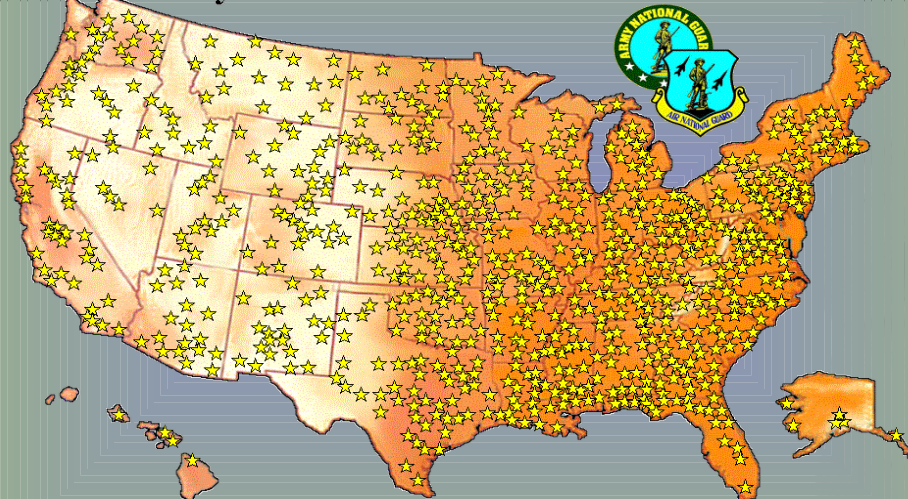
Standardized Tactics, Techniques, and Procedures (TTPs) for Global Army NETOPS

Merged Network Operations Security Centers (NOSCs)

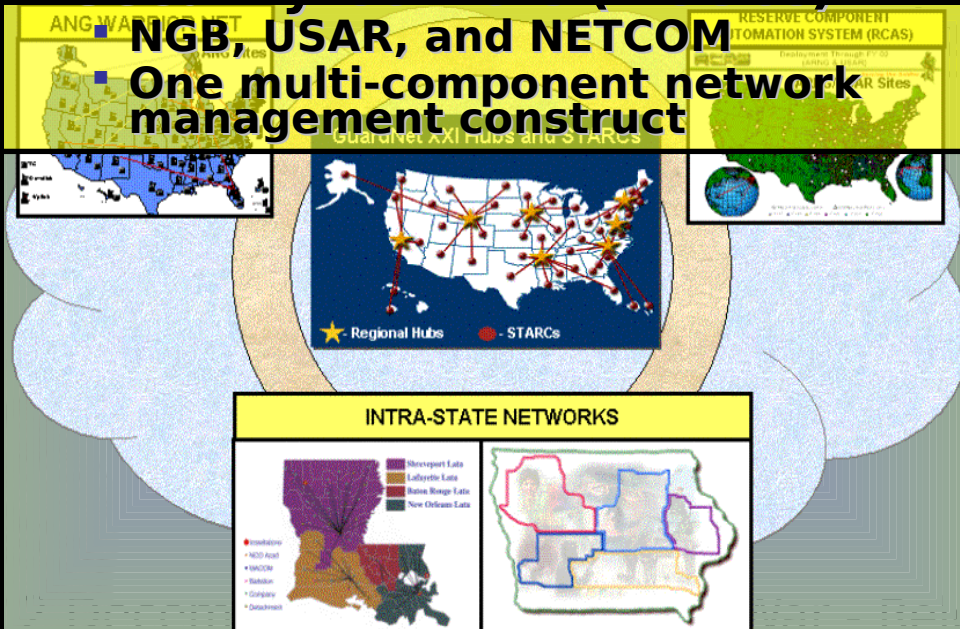
- NGB, USAR, and NETCOM
- One multi-component network management construct



Army & Air National Guard Installations Nationwide
Nearly 3300 Locations in 2700 Communities

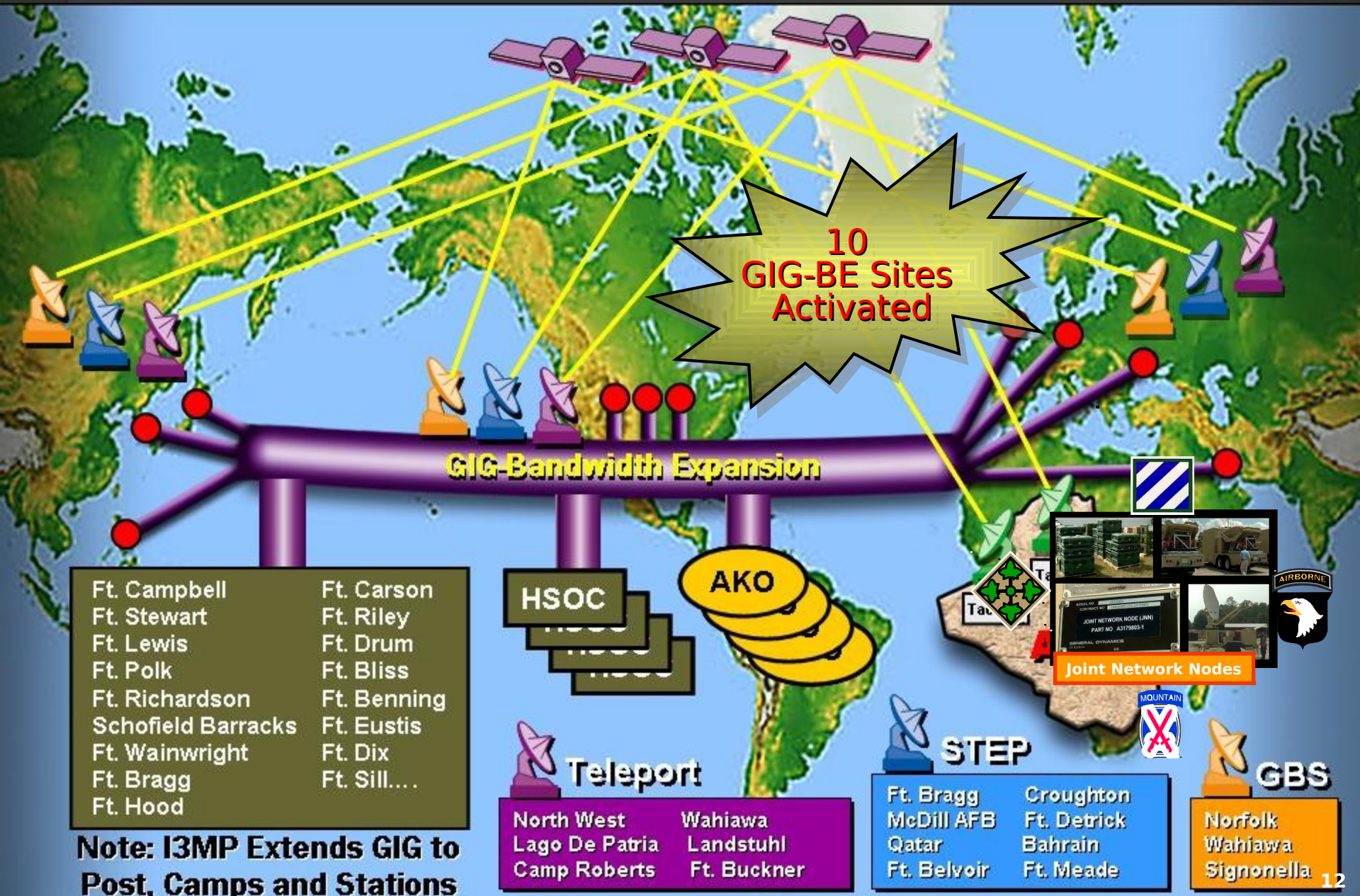


June 03 - Army CIO/G-6 is CIO for USAR





DISN (GIG-BE) 2004 - 2007





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Enterprise Network Operations (NetOps) Integrated Architecture



**Execu
ting
Now**

**Transforming while at
War...**

...meet current and
projected NetOps
environment



**Facilitate Joint
interoperabilit**

**Work
In
Progr
ess**

- Approved product list
- ...standards based
- ✓ DoD
- ✓ Army sustaining base
- ✓ Tactical NetOps
- LandWarNet NetOps

- DISA/
STRATCO
M
- NETCOM
- Product
Managers

- ...source
for UEx/BCT
Patch
Management
solution

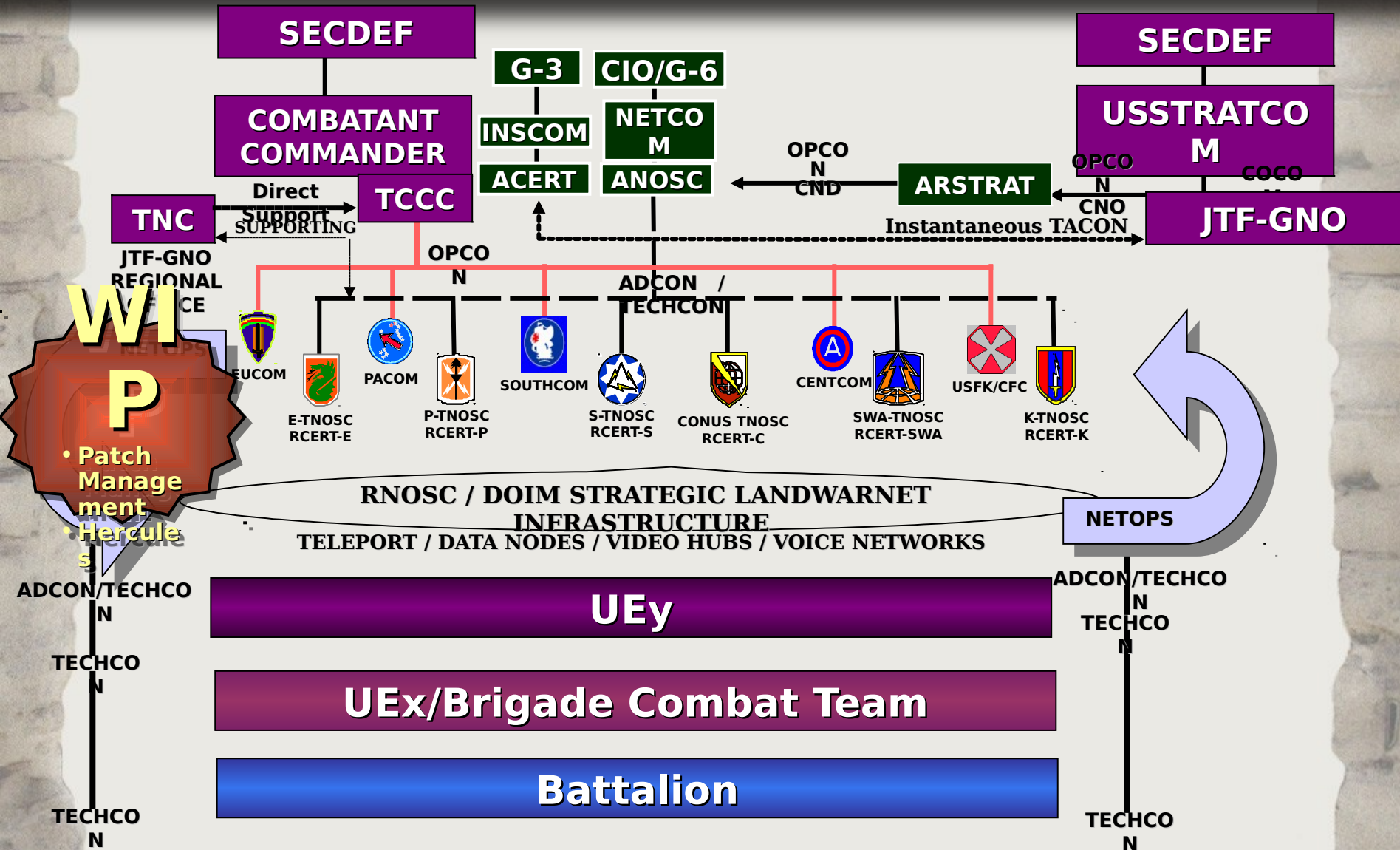
**Polic
y Out
Early
2005**



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Network Operations (NETOPS)

(System & Network Management; Information Assurance; Information Dissemination)



NETCOM Fights Network "Jointly" as an Enterprise



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Infusing Joint Capability

**Video
Teleconferencing
(VTC)**

**Non-Classified
Internet Protocol
Router Network
(NIPRNET)**

**Defense
Switched
Network
(DSN)**

**Secret Internet
Protocol Router
Network
(SIPRNET)**

**Voice Over
Internet
Protocol**

**Defense Red
Switch Network
(DRSN)**



✓ **Joint** ✓ **Modula** ✓ **Scalabl**

✓ **Rapidly**



Leveraging Commercial Capabilities



- IP - Internet Protocol
- JNTC-S - Joint Network Transport Capability-Spiral
- NIPR - Non-secure Internet Protocol Router Network
- SIPR - Secret Internet Protocol Router Network

- SVTC - Secure Video Teleconference
- WIN-T - Warrior Information Network - Tactical

JNTC-S

WIN-T

2006-2014 Advanced Technologies



2004-2006 Commercial Technologies

Voice Over IP/Dynamic IP
SIPR/NIPR/Video/SVTC
Commercial/Military-Satellite Communications

- Commercial satellite communications
- Wideband Gapfiller System (WGS)

- Advanced Extremely High Frequency (EHF)
- Mobile User Objective System (MUOS)
- Transformational Communications System (TCS)

- Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T)
- Blue Force Tracking (BFT)
- Trojan Spirit
- Combat Service

- USAR - acquired
 - Data Packages
 - Flyaway Tri-Band Satellite



JNTC-S Network Components "C2"

Delivering Now!

Maximum Bandwidth is dependent on configuration

Spiral in:

- Ka Band
- Operations on the move

...Ka

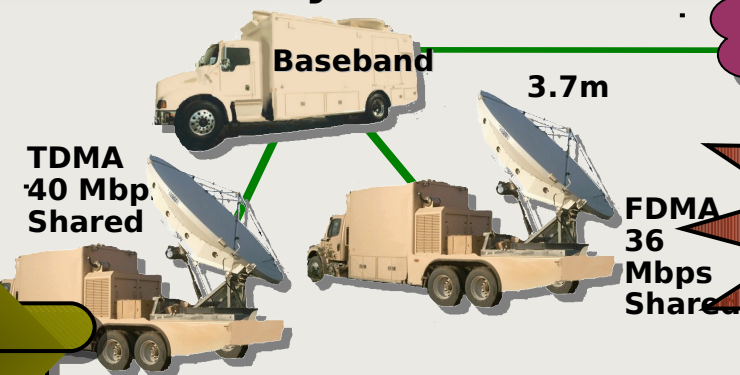
and Ku

Wireless Battlefield LAN

JNTC - S1



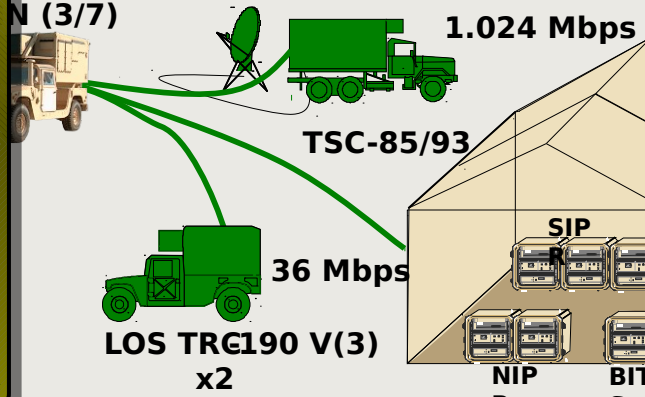
Gateway Hub (2)



GIG/DISH

Provides up to 76 Mbps of Commercial SATCOM Bandwidth

N (3/7)

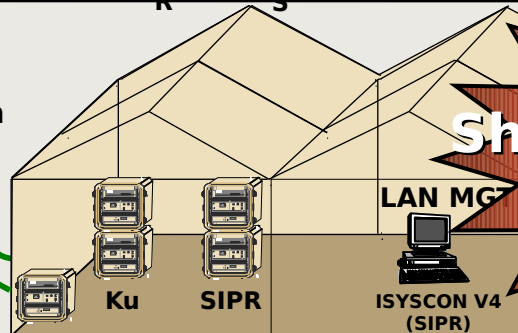
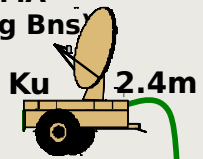


**7 Mbps SATCOM
36 Mbps HCLOS**

4 Mbps TDMA (Shared Among Bns)

Command Post Node (34)
2 Mbps

LOS TRC190 V(1)



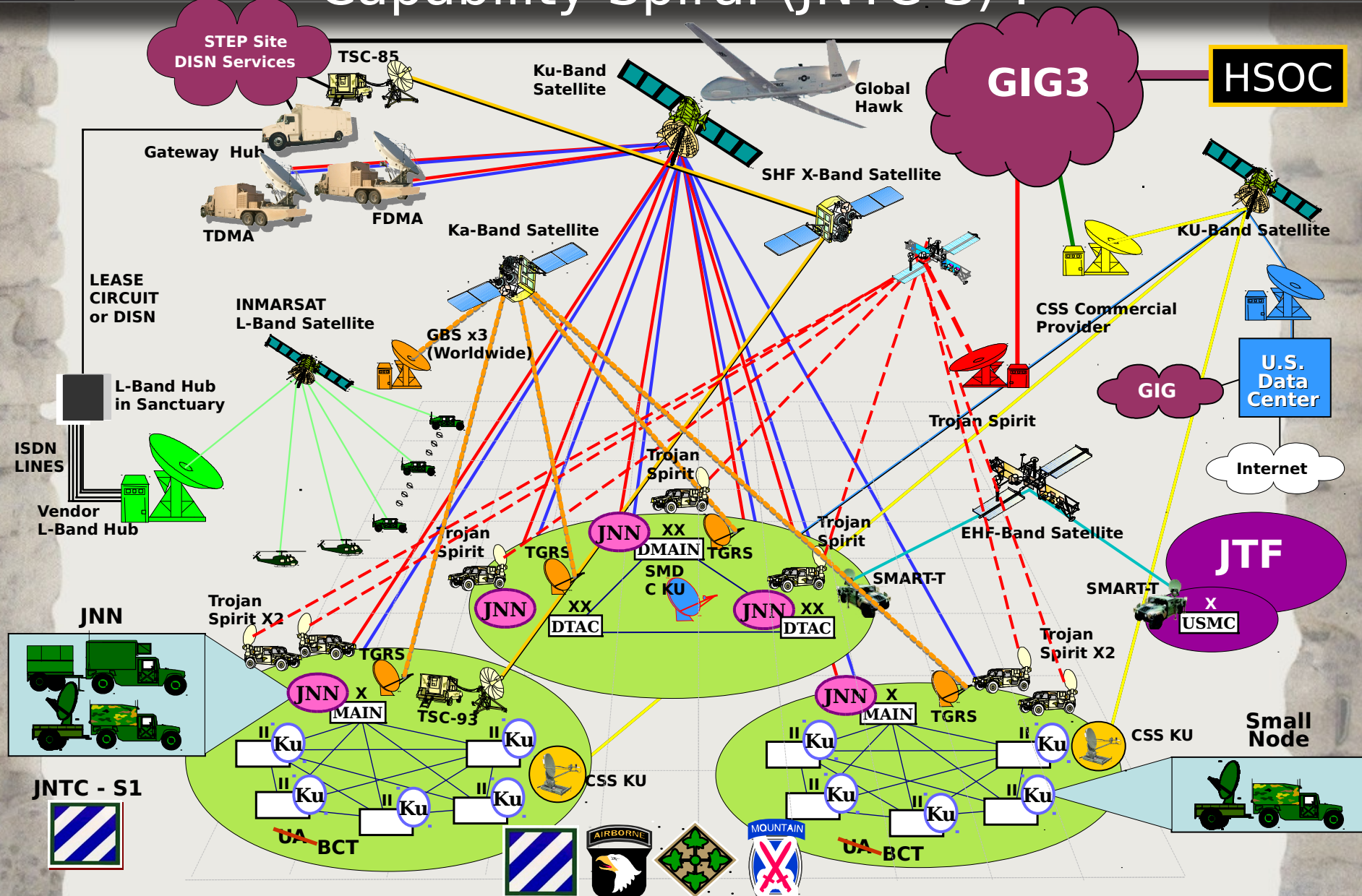
**4 Mbps Shared SATCOM
2 Mbps LOS**



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Joint Network Transport Capability-Spiral (JNTC-S) I





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**Concept:
Jan 04**

JNTC-S1 Rapid Fielding



BN CP Node Cases

On-site Training

- System Management
- JNN Operator
- Ku Trailer Operator

Gateway Hubs

KU Band Trailers



**Delivery:
9 AUG !!**



JNN Number 1

JNTC-S1 is being delivered



Spiraling Forward WIN-T Capabilities



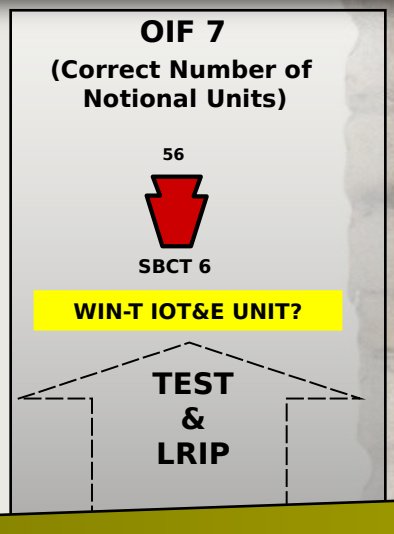
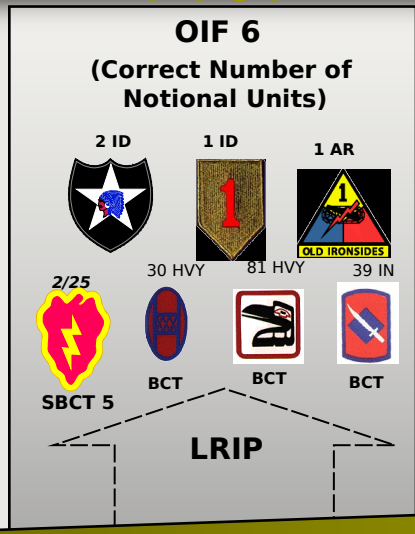
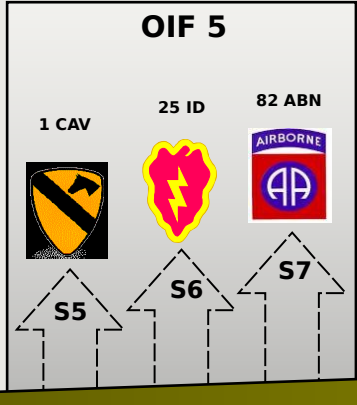
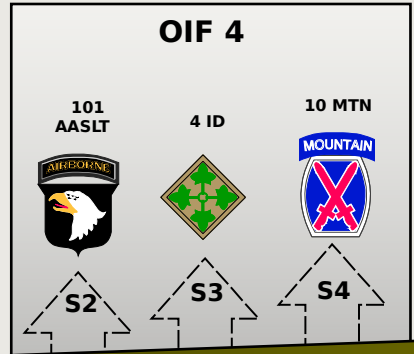
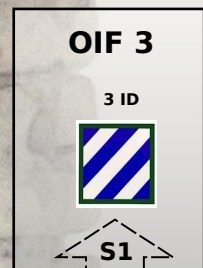
FY04

FY05

FY06

FY07

FY08



Joint Network Node (JNN) Capability

WIN-T (-) Capability

WIN-T Enhanced Capability

Supplemental Funded

Supplemental

WIN-T IOT&E Unit Fielding

Army POM & "Supplemental"

WIN-T Upgrade

Reset OIF 3 - 5 Army POM & "Supplemental"

FCS Spiral 1



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Upgrading the infrastructure

.....JNN and CTSF

Fort Gordon

Training

CTSF



\$9M applied to future training

- JNN CBT
- Ku Trailer CBT

Testing



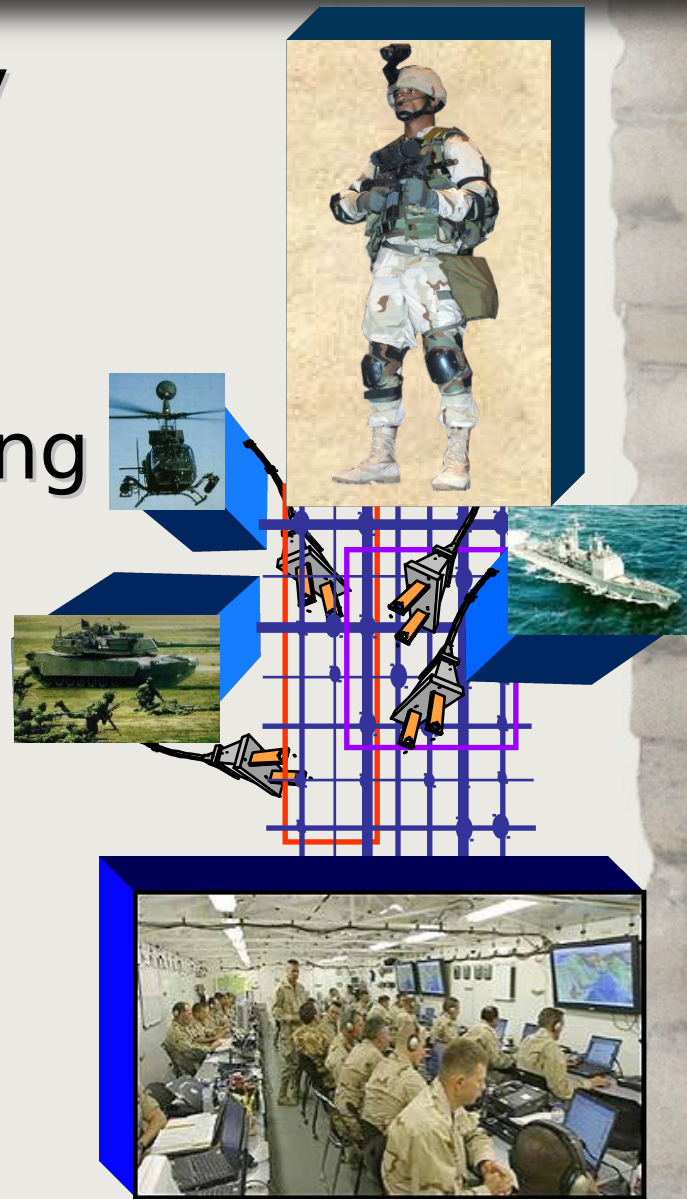


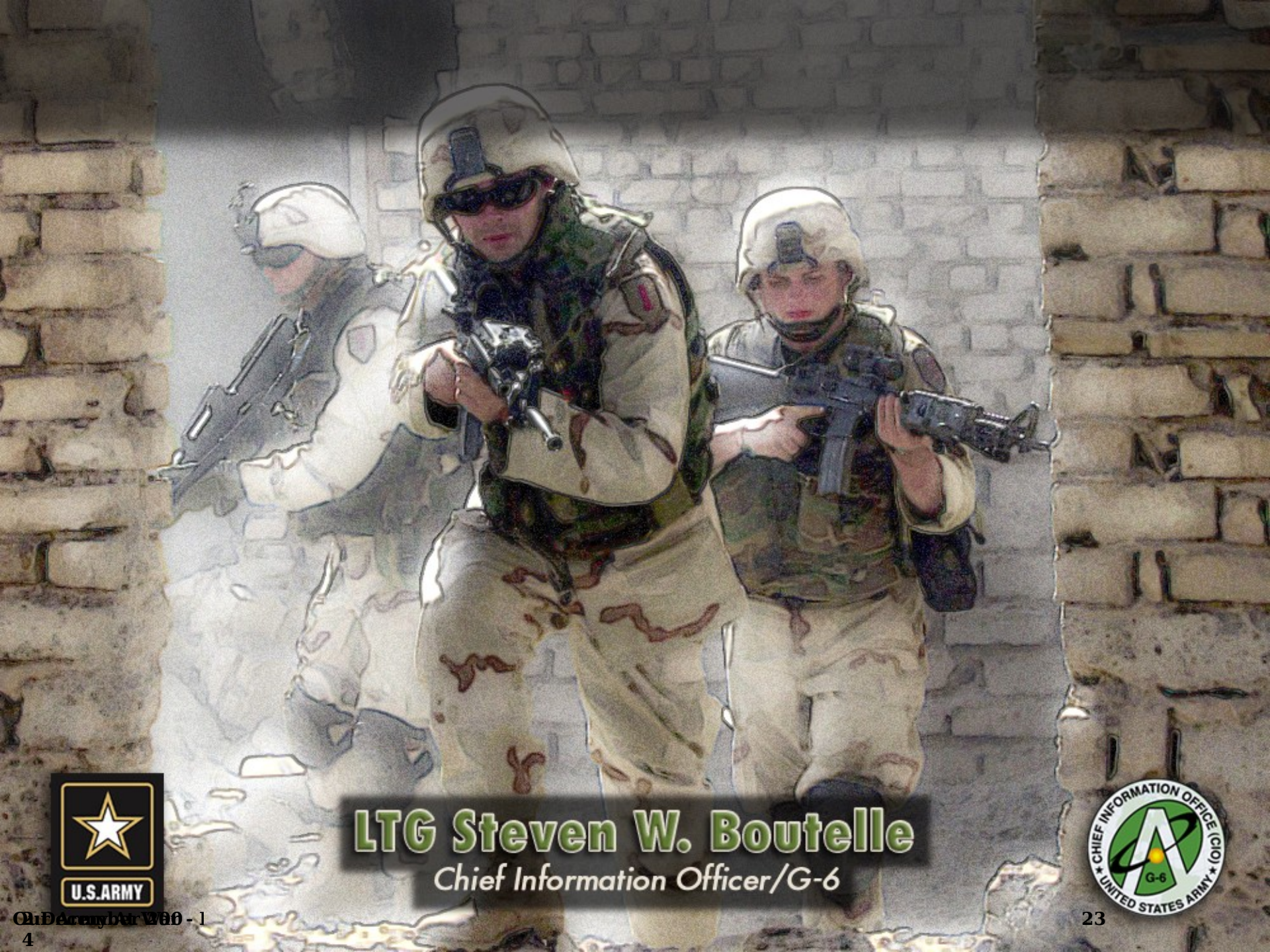
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Take Away's



- Moving to a Modular Army
...3ID
transforming NOW!
- Fielding advanced “Joint Interdependent” networking capabilities NOW!
- Leveraging Commercial technologyJNTC
preparing to
transition to WIN-T - - FCS
- Improving the support structure - training & testing.





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